

Remarks:

1. In the Office Action of October 6, 2004, Examiner rejected all then pending claims 1 – 18. Applicants appreciate Examiner's careful review of the application.
2. **Amendments to the Specification:** Language was added to the paragraph on page 14, describing the CAD viewer as a type of CAD interface means. That the CAD viewer is a CAD interface means is clear from the language in the same paragraph of the Specification as filed, which describes the CAD viewer interfacing with a calloff link and the CAD system. In the paragraph beginning at line 14 on page 10 of the Specification, the Drawings Mappings Table was incorrectly designated as T7. It is designated as T4 in FIG. 3 as filed. These corrections introduce no new subject matter and Applicants respectfully request approval of the amendment.
3. **Amendments to the Claims:** Terminology in the claims has been amended to reflect more closely the terms used in the Specification as originally filed. For example, "default tag" has been amended to "system tag". Claim 1 was amended to more clearly identify the relationship between the various elements of the method and now includes the subject matter of previously filed claims 1 – 6, 9 and 10, and at least parts of 13, 14, and 16. Specifically, claim 1 includes the steps of providing a base document, providing a base document database (shown in FIG. 4b, whereby the MAP-ID corresponds to the document identifier), creating a system tag database (T2, shown in FIGS. 5 and 6), providing a system mapping means (T3, shown in FIGS. 4B and 6), creating a project-specific user tag database (T2, shown in FIGS. 5 and 6), and automatically generating a project specification (shown in FIG. 6).
4. Claims 1 – 18 are cancelled.
5. New claims 19 – 32 are added. Claim 19 includes the subject matter of previously filed claims 4 and 14 and is supported by language in lines 18 – 27 on page 9 of the Specification as filed. Claims 20 – 29 include the subject matter of previously

filed claims 9 – 11 and are supported by language in line 1 on page 10 to line 6 on page 11 of the Specification as filed. The steps recited in claims 20 – 29 are shown in FIGS. 1B and 5. Claims 30 – 32 include the subject matter of previously filed claims 12, 13 and 18. Language supporting these claims is found on page 12 of the Specification as originally filed, lines 1 – 27.

6. Neither the amendments to claim 1 nor the addition of claims 19 – 32 introduce new subject matter. Applicants therefore request approval and entry claims 1 and 19 – 32.

7. **Rejection under 35 U.S.C. § 103(a):** Examiner rejected claims 1 – 18 as being unpatentable over Rossberg et al (U.S. Patent 5,341,469) in view of Wright (U.S. Patent 6,581,040 B1). Examiner asserts that Rossberg et al. teaches all the elements of the first claim, with the exception of the element of providing online access.

8. Both the Rossberg et al. method and the method of the present invention create a project specific specification, based perhaps on the very same base document, such as a base document used for construction projects for commercial buildings, but there are significant differences between the two methods. The first major difference that distinguishes the method of the present application from the method disclosed by Rossberg et al. is its mapping process. Essentially, the present invention creates a map of the base document, the map being a database that contains paragraph identifiers and parent-child associations. FIG. 2 of the present application shows the division list of a standard base document. FIGS. 4A – 4C show how the base document is "mapped." Each subdivision, section, and paragraph in the base document is assigned a paragraph identifier, as shown in FIG. 4C. Each unit of information that is typically included in a project is called a "system tag" and each system tag is assigned a unique tag identifier, as shown in Table 2 in FIG. 4A. Each system tag is "mapped" to or associated with a specific one of the subdivisions, sections, and paragraphs of the base document. The mappings table, Table 3 in FIG. 4B, stores each system tag, along with its parent identifier. These tables or databases contain the complete map of the base

document.

9. Essentially, generation of a project specification according to the invention of the present application is done from the bottom up. "User tags" are project-specific information found on the drawings. The method of the present invention takes the user tags, finds the corresponding system tags, and then generates the project specification by taking the mapping information of the corresponding system tags and "turning on" or identifying the paragraphs that are to be included in the project specification. So, the mapping information for the user tag "brick pavers on sand" includes the tag identifier "sand aggregate" 600, its parent "brick pavers" 553, and its parent "unit pavers" 221. When the project specification is presented to the spec writer, the paragraphs 16, 7, 6, 5, 2, and 1 will automatically be "turned on", that is, shown as included in the specification. The other paragraphs will be presented as unnecessary, that is, shown as crossed out.

10. Because of the mapping that is done, the project specification starts off as a document that includes only the information from the mapping process. In other words, it contains only those subdivisions, sections, and paragraphs of the base document that have been specifically called for in the project-specific database (user tags table, T 1). The spec writer does not have to go through the base document paragraph by paragraph and remove unneeded subdivisions, sections, and paragraphs, as is the case with the Rossberg et al. method. See Col. 4, lines 56 – 58, "The first pass removes all the elements of the master specification which do not apply. The mapping method of the present invention is a much more accurate and less-time consuming way of determining which paragraphs of the base document are required for the project specification. Rossberg et al. further states that the first pass of the edit process, *i.e.*, removing unnecessary text, is performed by examining each element of the the master specification, consulting the knowledge base (spec writer), and determining if the element is applicable to the specific project. See Col. 5, lines 5 – 13. This is a manual operation, carried out by one familiar with the project. See Col. 5, line 59 – Col. 6, lines

32.

11. A second major distinguishing feature of the present method lies in how information on the drawings is incorporated into the project specification. Information on drawings is in the form of objects (walls, partitions, pavers, windows, etc.) elements, and text (keynotes and/or calloffs). Rossberg et al. states that it is very difficult to transfer information from drawings automatically to the project spec. See col. 5, line 46 – col. 6 line 16. The Rossberg et al. method does not solve this problem, but instead, requires that the information incorporated onto a CAD drawing be taken from a standardized master keynote list. In other words, rather than taking the information from the CAD drawing, the CAD draftsman incorporates into the CAD drawing keynotes from the master keynote list. This alleviates problems the spec writer has in interpreting the information on the drawings and associating the information with the proper subdivisions, sections, and/or paragraphs of the industry standard for the project specification, but does not automate the step of incorporating information from a CAD into a project specification. In the Rossberg et al. method, it is the spec writer who reviews the drawings and goes through the question and answer pairs to determine which subdivisions, sections, paragraphs of the base document are to be used in the project specification.

12. It is important to note that the Rossberg et al. method does not incorporate information directly from the drawings. Rather, it standardizes text (a keynote) that is incorporated into the CAD drawing, so that the keynote may be used to define a necessary document of the project spec. See FIG. 1, element 23 (Project Knowledge Base). Keynotes from the Master Keynote List are put into the Project Drawings. The Rossberg et al. method does not provide a way of incorporating information directly from the objects or elements of the drawings, or from the calloffs or keynotes. In other words, the primary knowledge base is not the drawing, but the spec writer. See col. 4, lines 63 – 66.

13. The method of the present application, on the other hand, automatically extracts from a CAD drawing data relating to drawing objects, elements, keynotes, and calloffs by means of CAD interface software, automatically associates at least some of that data with system tag identifiers, and then creates a project specification that contains subdivisions, sections and paragraphs that are relevant to the extracted data. In other words, the CAD interface means, which typically is software provided by the CAD software developer, provides data on the objects in the drawings, such as wall, foundation, brick paver on sand, window, etc. Much of the data on the drawing will be in a form that allows the project specification interface means of the present method to automatically recognize the user tag, which may represent an object, element, keynote, or calloff on the drawing, and to determine the corresponding system tag in the system tag database. The system mapping means already contains the mapping information on the subdivisions, sections, and paragraphs of the base document, such as for a commercial building project, so it is not necessary to go through all the subdivisions, sections, and paragraphs of the base document, to determine if they need to be included in the project specification. The drawing objects, keynotes or other text elements that are not recognized by the project specification interface means are identified as "unscanned" and left for the spec writer to manually associate with the corresponding system tag or define as an ignorable tag, via the project specification interface means.

14. The method according to the present invention automatically generates a user-tag database, such as a table, directly from CAD drawing data. The user tag database (table) contains the user tags, along with their tag identifiers. When the user-tag definition process is completed, the user-tag database is interfaced with the system mapping means and the base document to create a project specification that shows all relevant subdivisions, sections, and/or paragraphs for the specific project.

15. Claims 20 – 29 as presently submitted recite steps of incorporating CAD information directly into the databases for creating the project specification. Rossberg

et al. does not disclose, teach, suggest, render obvious, or anticipate incorporate CAD information directly from the CAD drawing into the project specification. Accordingly, claims 20 – 29 contain allowable subject matter and Applicants respectfully request that Examiner allow these claims.

16. Claims 30 – 32 recite the steps of providing a checklist for defining the user tags, whereby the checklist is also made available online. Examiner had rejected the previously filed claims that recited an online process, asserting that Wright (U.S. Patent 6,581,040 B1) discloses a network accessed business system and database for managing projects. Applicants respectfully submit that neither Rossberg et al. or Wright disclose the mapping means recited in claim 1 and that the method steps recited the checklist are not anticipated or rendered obvious by the disclosures of Rossberg et al. or Wright, either alone or in combination. Furthermore, these claims depend from claim 1, which Applicants submit contains allowable subject matter. Accordingly, these claims also contain allowable subject matter and Applicants request that Examiner allow them.

17. In summary: Claim 1 as presently amended recites a method of mapping a base document for generating a project specification that is not disclosed by the Rossberg et al. method. Claims 2 – 18 are cancelled. Claims 19 – 32 all depend directly or indirectly from claim 1. Claims 20 – 29 recite a method of automatically incorporating information directly from a CAD drawing into the project-specific database, for creating the project specification. The method according to the invention of the present application is not disclosed, taught, or suggested in the cited prior art of Rossberg et al. or by Wright, either alone or in combination. Applicants respectfully submit that claim 1 and its dependent claims 19 – 32 contain allowable subject matter and therefore request that Examiner withdraw his rejections under 35 U.S.C. § 103(a) as presented in section 6 of the Office Action.

18. This paper is being filed within the fourth month from the mailing date of the office action. A petition for time extension and the payment of the appropriate late fee

are enclosed herewith.

Respectfully submitted,



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Enclosed:  
Petition for Time Extension

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